

Application No: 09/681,022
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Page 2 of 10

Examiner: Jeremy R. Pierce
Art Unit: 1711

Amendments to the Specification:

[0009] According to the invention, a laminate for use in making a thermoformed article comprises first and second strengthening outer layers and a core layer between the strengthening layers. The core layer comprises a batt of nonwoven thermoplastic fibers having 20-50% fine fibers by weight with a denier in the range of 0.8-3.0, 10-50% binder fibers by weight, and other fibers with a denier in the range of 4.0-15.0. Each of the strengthening layers comprises a batt of nonwoven polymeric fibers having less-more by weight coarser fine fibers by weight than in the core layer. The strengthening layers provide the predominant flexural rigidity for the laminate and the core layer provides the predominant sound absorption for the laminate. The thermoplastic fibers can include polyester, polyolefin, and nylon. The polyester fibers preferably include bicomponent fibers, such as a PEF sheath-core bicomponent fiber.